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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

DEAN, RAYMOND S

ART UNIT

PAPER NUMBER

2618

DATE MAILED: 06/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/871,081	Applicant(s) OH, DAE-SIK	
	Examiner Raymond S. Dean	Art Unit 2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 April 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 - 3, 6 - 13, 16 - 20, 24 - 25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 - 3, 6 - 13, 16 - 20, 24 - 25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 September 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed April 10, 2006 have been fully considered but they are not persuasive.

Examiner respectfully disagrees with Applicant's assertion on Page 11 4th Paragraph of the Remarks "the Examiner has not identified any teaching in Steer that suggests interrupting ...". Steer teaches, as detailed in the Office Action dated January 30, 2006, a closed loop power control process (See Col. 11 lines 48 – 63). The power control process is prevented or interrupted from normal operation, which is increasing the transmit power as much as possible to compensate for fading. The location based power control of Steer, which comprises detecting a location, interrupts the normal operation of the closed loop power control process by limiting the maximum range of increase in transmit power (See Cols. 11 lines 48 – 67, 12 lines 1 – 7).

Examiner respectfully disagrees with Applicant's assertion on Page 12, 1st Paragraph "Although the Examiner cited to a number of sections of Steer, Applicant submits ...". It is true that the power control map information is used to set the power at initial call setup, however this map is also selected by the base station and transmitted to the mobile station such that the mobile station uses this map and location information to adjust the transmit power (See Cols. 7 lines 66 – 67, 8 lines 1 – 10), in other words the transmit power is set according to the location of the mobile.

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Steer, as set forth above, is cited to teach a base station selecting a new power level based on a change in location. Sunay is cited to teach a base station selecting a new initial power level (See Column 5 lines 20 – 40, the power level based on the path loss and desired value of the received power level at the base station is the initial power level). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the initial power level taught by Sunay in the system of Steer for the purpose of controlling the transmission power of the mobile station during handoff of a call between base stations thereby reducing the potential for dropped calls or the occurrences of near-far problems during handoff between base stations of different size cells as taught by Sunay.

Examiner respectfully disagrees with Applicant's assertion on Page 13, 1st Paragraph "No such matching is taught in Soliman" and Applicant's assertion on Page 14, 1st Paragraph "The SNR values are not setpoints ...". Soliman teaches a reverse link power control loop, which is a closed power control loop (See Col. 1 lines 28 – 45). A closed power control loop adjusts the power upward or downward such that a particular setpoint value such as an SIR or SNR is maintained or matched.

Examiner respectfully disagrees with Applicant's assertion on Page 14 3rd Paragraph "Neither Steer or Sunay teaches based on the changed location ..." for the same reasons set forth above.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1 – 3, 6, 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Steer (6,845,246) in view of Sunay et al. (5,940,743).

Regarding Claim 1, Steer teaches a method of controlling power used for communications between a mobile station and a base station, the method comprising: the base station determining a location of the mobile station when the mobile station is going to engage in a call (Column 3 lines 8 – 29, Column 6 lines 3 – 6, lines 22 – 28, lines 50 – 57, lines 61 – 65, Column 7 lines 1 – 19, lines 25 – 27, lines 66 – 67, Column 8 lines 1 – 10, lines 23 – 25, the base station is a network component, part, or point); based on the location, the base station selecting a power level of a primary communication channel for communication from the mobile station to the base station (Column 1 lines 11 – 13, Column 3 lines 8 – 29, Column 6 lines 3 – 6, lines 22 – 28, lines 50 – 57, lines 61 – 65, Column 7 lines 1 – 19, lines 25 – 27, lines 66 – 67, Column 8 lines 1 – 10, lines 23 – 25); and starting at an initial power level, engaging in a power control process that regulates the power of the primary communication channel used for communication from the mobile station to the base station (Column 1 lines 41 – 51, Column 11 lines 48 – 50, Column 12 lines 61 – 65, this is a closed loop power control

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method which regulates the power of the mobile, said power control loop, though limited, exists in the system of Steer); the base station detecting a changed location of the mobile station; and in response to detecting the changed location, the base station interrupting the power control process (Column 6 lines 22 – 28, Column 7 lines 1 – 19, lines 66 – 67, Column 8 lines 1 – 10, lines 23 – 25, Column 11 lines 48 – 67, Column 12 lines 1 – 7); based on the change location, the base station selecting a new power level (Column 1 lines 11 – 13, Column 3 lines 8 – 29, Column 6 lines 3 – 6, lines 22 – 28, lines 50 – 57, lines 61 – 65, Column 7 lines 1 – 19, lines 25 – 27, lines 66 – 67, Column 8 lines 1 – 10, lines 23 – 25); and starting at a new initial power level, engaging in a new power control process that regulates the power of the primary communication channel used for communication from the mobile station to the base station (Column 1 lines 41 – 51, Column 11 lines 48 – 50, Column 12 lines 4 – 7, this is a closed loop power control method which regulates the power of the mobile, said power control loop, though limited, exists in the system of Steer).

Steer does not teach a base station selecting an initial power level and a new initial power level.

Sunay teaches a base station selecting an initial power level (Column 5 lines 20 – 40, the power level based on the path loss and desired value of the received power level at the base station is the initial power level) and a new initial power level (Column 5 lines 20 – 40, the power level based on the path loss and desired value of the received power level at the base station is the initial power level which is also a new initial power level).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the initial power level taught by Sunay in the system of Steer for the purpose of controlling the transmission power of the mobile station during handoff of a call between base stations thereby reducing the potential for dropped calls or the occurrences of near-far problems during handoff between base stations of different size cells as taught by Sunay.

Regarding Claim 2, Steer in view of Sunay teaches all of the claimed limitations recited in Claim 1. Steer further teaches the base station referring to a database that correlates locations with power levels; and the base station selecting from the database a power level that is correlated with the location (Column 3 lines 8 – 27, Column 7 lines 16 – 27, lines 25 – 27, lines 66 – 67, Column 8 lines 1 – 10, lines 23 – 25, the base station is a network component or point).

Regarding Claim 3, Steer in view of Sunay teaches all of the claimed limitations recited in Claim 2. Sunay further teaches the base station sending to the mobile station an instruction to transmit at the selected initial power level, whereby the mobile station responsively transmits at the selected initial power level (Column 5 lines 20 – 40).

Regarding Claim 6, Steer in view of Sunay teaches all of the claimed limitations recited in Claim 1. Steer further teaches a base station (Column 9 lines 13 – 15).

Regarding Claim 24, Steer teaches a power control system comprising: a database that correlates locations with power levels (Column 3 lines 8 – 29); and a base station controller (BSC) with access to said database, the BSC being configured so that when a mobile station is going to engage in a call, the BSC determines a location of the

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mobile station, selects from the database a power level based on the location of the mobile station (Column 3 lines 8 – 29, Column 6 lines 3 – 6, lines 22 – 28, lines 50 – 57, lines 61 – 65, Column 7 lines 1 – 19, lines 25 – 27, lines 66 – 67, Column 8 lines 1 – 10, lines 23 – 25, the base station controller is a network component or point), the BSC being further configured so that the BSC continually monitors the location of the mobile station (Col. 6 lines 22 – 28) and, in response to detecting a new location of the mobile station, the BSC selects from the database a new initial power level based on the new location of the mobile station (Cols. 7 lines 66 – 67, 8 lines 1 – 10, lines 23 – 25).

Steer does not teach initial power levels and instructing the mobile station to transmit at the initial power level and the new initial power level.

Sunay teaches initial power levels and instructing the mobile station to transmit at the initial power level (Column 5 lines 20 – 40, the power level based on the path loss and desired value of the received power level at the base station is the initial power level) and the new initial power level (Column 5 lines 20 – 40, the power level based on the path loss and desired value of the received power level at the base station is the initial power level which is also a new initial power level).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the initial power level taught by Sunay in the system of Steer for the purpose of controlling the transmission power of the mobile station during handoff of a call between base stations thereby reducing the potential for dropped calls or the occurrences of near-far problems during handoff between base stations of different size cells as taught by Sunay.

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4. Claims 7 – 8 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Steer (6,845,246) in view of Sunay et al. (5,940,743) and in further view of Soliman (US 6,490,460).

Regarding Claim 7, Steer teaches a method of controlling power of communications between a mobile station and a base station, the method comprising: determining a location of the mobile station (Column 4 lines 63 – 67, Column 5 lines 1 – 3); based on the location, the base station selecting a transmit power for the mobile station on the primary communication channel (Column 1 lines 11 – 13, Column 3 lines 8 – 29, Column 6 lines 3 – 6, lines 22 – 28, lines 50 – 57, lines 61 – 65, Column 7 lines 1 – 19, lines 25 – 27, lines 66 – 67, Column 8 lines 1 – 10, lines 23 – 25); and using an initial transmit power as a basis to manage mobile station transmit power on the primary communication channel (Column 1 lines 41 – 51, Column 11 lines 48 – 50, Column 12 lines 61 – 65, this is a closed loop power control method which regulates the power of the mobile, said power control loop, though limited, exists in the system of Steer).

Steer does not teach selecting a reverse link set point and an initial transmit power level based on the location, sending to the mobile station an instruction to use the initial transmit power, adjusting mobile station transmit power on the primary communication channel so that a mobile station signal-to-noise ratio matches the reverse link setpoint.

Sunay teaches selecting an initial transmit power level based on the location (Column 5 lines 20 – 40, the power level based on the path loss and desired value of the received power level at the base station is the initial power level, the path loss is

directly dependent on the location of the mobile thus the initial transmit power is also based on the location of said mobile) and sending to the mobile station an instruction to use the initial transmit power (Column 5 lines 20 – 40).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the initial power level taught by Sunay in the system of Steer for the purpose of controlling the transmission power of the mobile station during handoff of a call between base stations thereby reducing the potential for dropped calls or the occurrences of near-far problems during handoff between base stations of different size cells as taught by Sunay.

Steer in view of Sunay does not teach selecting a reverse link set point based on the location and adjusting mobile station transmit power on the primary communication channel so that a mobile station signal-to-noise ratio matches the reverse link setpoint.

Soliman teaches selecting a reverse link set point based on the location (Figure 2, Column 4 Table 1, Column 1 lines 28 – 45, Column 2 lines 40 – 57, Column 3 lines 19 – 28, Column 4 lines 63 – 67, Column 7 lines 11 – 29) and adjusting mobile station transmit power on the primary communication channel so that a mobile station signal-to-noise ratio matches the reverse link setpoint (Col. 1 lines 28 – 45, See Also Response To Arguments set forth above).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the reverse link set point selection method taught by Soliman in the system of Steer in view of Sunay for the purpose of providing a power control system that would dynamically adjust the parameters of the reverse link control

loop in response to changing position and/or speed of a mobile station, so as to conserve transmit power and increase cell capacity as taught by Soliman.

Regarding Claim 8, Steer in view of Sunay and in further view of Soliman teaches all of the claimed limitations recited in Claim 7. Soliman further teaches referring to a database that correlates locations with reverse link set points; and selecting from the database a reverse link set point that is correlated with the location (Figure 2, Column 4 Table 1, Column 7 lines 11 – 29).

Regarding Claim 13, Steer in view of Sunay and in further view of Soliman teaches all of the claimed limitations recited in Claim 7. Soliman further teaches a base station (Figure 4, Column 8 lines 17 – 20).

5. Claims 9 – 12 are rejected under 35 U.S.C. 103(a) as being unpatentable Steer (6,845,246) in view of Sunay et al. (5,940,743) and in further view of Soliman (US 6,490,460) as applied to Claim 7 above, and further in view of Chen et al. (US 6,763,244)

Regarding Claim 9, Steer in view of Sunay and in further view of Soliman teaches all of the claimed limitations recited in Claim 7. Steer in view of Sunay and in further view of Soliman does not teach measuring an energy level of a signal received from the mobile station; based on the energy level and an estimate of air interface noise, No, computing a measured value of E_b/N_0 ; comparing a measured value of E_b/N_0 with the reverse link set point and if the measured value of E_b/N_0 does not

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match the reverse link set point, sending to the mobile station an instruction to adjust the mobile station transmit power on the primary communication channel.

Chen teaches measuring an energy level of a signal received from the mobile station; based on the energy level and an estimate of air interface noise, N_0 , computing a measured value of E_b/N_0 (Column 4 lines 65 – 67, Column 5 lines 12 – 21); comparing a measured value of E_b/N_0 with the reverse link set point and if the measured value of E_b/N_0 does not match the reverse link set point, sending to the mobile station an instruction to adjust the mobile station transmit power on the primary communication channel (Column 4 lines 65 – 67, Column 5 lines 12 – 21).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the power control method taught by Chen in the wireless system of Steer in view of Sunay and in further view of Soliman for the purpose of maximizing reverse link capacity as taught by Chen.

Regarding Claim 10, Steer in view of Sunay and in further view of Soliman teaches all of the claimed limitations recited in Claim 7. Steer further teaches receiving a signal at the base station from the mobile station (Column 1 lines 41 – 51, Column 11 lines 48 – 50, Column 12 lines 61 – 65, during closed loop power control the base station will receive a signal from the mobile station such that said base station can measure the signal quality of the reverse link).

Steer in view of Sunay and in further view of Soliman does not teach measuring a frame error rate of the signal; comparing the measured frame error rate to a threshold frame error rate; if the measured frame error rate does not match the threshold frame

error rate, adjusting the reverse link set point; using the adjusted reverse link set point as a basis to manage mobile station transmit power on the primary communication channel.

Chen teaches measuring a frame error rate of the signal; comparing the measured frame error rate to a threshold frame error rate (Column 4 lines 65 – 67, Column 5 lines 40 – 67); if the measured frame error rate does not match the threshold frame error rate, adjusting the reverse link set point (Column 4 lines 65 – 67, Column 5 lines 40 – 67); using the adjusted reverse link set point as a basis to manage mobile station transmit power on the primary communication channel (Column 4 lines 65 – 67, Column 5 lines 40 – 67).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the outer loop method taught by Chen in the wireless system of Steer in view of Sunay and in further view of Soliman for the purpose of maintaining a desired link performance thus reducing delays in serving users as taught by Chen.

Regarding Claim 11, Steer in view of Sunay in view of Soliman and in further view of Chen teaches all of the claimed limitations recited in Claim 10. Soliman further teaches based on the location, selecting a bounding value for a reverse link set point; using the bounding value as a basis to limit the reverse link set point (Figure 2, Column 7 lines 11 – 29, the SNR ranges provide the bounds).

Regarding Claim 12, Steer in view of Sunay in view of Soliman and in further view of Chen teaches all of the claimed limitations recited in Claim 11. Soliman further teaches wherein selecting a bounding value for a reverse link set point comprises:

referring to a database that correlates locations with bounding values of reverse link set points; and selecting from the database a reverse link set point that is correlated with the location (Figure 2, Column 7 lines 11 – 29).

6. Claims 16 – 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen et al. (US 6,763,244) in view of Steer (US 6,845,246) and in further view of Soliman (US 6,490,460).

Regarding 16, Chen teaches a method of controlling power of communications between a mobile station and a base station, the method comprising the following steps: computing an energy-to-noise measure for a signal received from the mobile station (Column 4 lines 65 – 67, Column 5 lines 12 – 21); determining if the energy-to-noise measure matches the set point (Column 4 lines 65 – 67, Column 5 lines 12 – 21); and in response to a determination that the energy-to-noise measure does not match the initial set point, instructing the mobile station to adjust the mobile station transmit power (Column 4 lines 65 – 67, Column 5 lines 12 – 21).

Chen does not teach determining a location of the mobile station; based on the location, the base station selecting a set point and a mobile station transmit power on a primary communication channel; instructing the mobile station to transmit at the mobile station transmit power on the primary communication channel.

Steer teaches determining a location of the mobile station (Column 4 lines 63 – 67, Column 5 lines 1 – 3); based on the location, the base station selecting a mobile station transmit power on a primary communication channel (Column 1 lines 11 – 13,

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Column 3 lines 8 – 29, Column 6 lines 3 – 6, lines 22 – 28, lines 50 – 57, lines 61 – 65, Column 7 lines 1 – 19, lines 25 – 27, lines 66 – 67, Column 8 lines 1 – 10, lines 23 – 25); instructing the mobile station to transmit at the mobile station transmit power on the primary communication channel (Column 8 lines 6 – 10, the fact that the mobile will transmit uplink signals means that there will be a point in time when said mobile will be instructed to transmit said signals).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the location determination method and power selection based on said location method taught by Steer in the wireless system of Chen for the purpose of preventing the power control feedback loop from correcting for deep fades thereby substantially eliminating system degradation as taught by Steer.

Chen in view of Steer does not teach based on location, selecting a set point.

Soliman teaches based on location, selecting a set point (Figure 2, Column 4 Table 1, Column 1 lines 28 – 45, Column 2 lines 40 – 57, Column 3 lines 19 – 28, Column 7 lines 11 – 29).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the reverse link set point selection based on location method in the wireless system of Chen in view of Steer for the purpose of adjusting the parameters of the reverse link power control loop in response to changing position and/or speed of a mobile station thereby conserving transmit power and increasing cell capacity as taught by Soliman.

Regarding Claim 17, Chen in view of Steer and in further view of Soliman teaches all of the claimed limitations recited in Claim 16. Chen further teaches monitoring an error rate of signals received from the mobile station (Column 4 lines 65 – 67, Column 5 lines 40 – 67); determining if the error rate matches a predetermined threshold; in response to a determination that the error rate does not match the predetermined threshold, adjusting the set point (Column 4 lines 65 – 67, Column 5 lines 40 – 67).

Regarding Claim 18, Chen in view of Steer and in further view of Soliman teaches all of the claimed limitations recited in Claim 17. Chen further teaches periodically repeating the steps of d – f and g – I steps (Column 4 lines 65 – 67, Column 5 lines 12 – 67).

Regarding Claim 19, Chen in view of Steer and in further view of Soliman teaches all of the claimed limitations recited in Claim 18. Steer further teaches detecting a new location of the mobile station (Column 4 lines 63 – 67, Column 5 lines 1 – 3), repeating steps b – c (Column 3 lines 8 – 27, Column 7 lines 16 – 24, lines 66 – 67, Column 8 lines 1 – 10, lines 23 – 25). Soliman further teaches based on location, selecting a set point (Figure 2, Column 4 Table 1, Column 1 lines 28 – 45, Column 2 lines 40 – 57, Column 3 lines 19 – 28, Column 7 lines 11 – 29). Chen further teaches repeating steps d – f (Column 4 lines 65 – 67, Column 5 lines 12 – 21).

Regarding Claim 20, Chen in view of Steer and in further view of Soliman teaches all of the claimed limitations recited in Claim 16. Soliman further teaches a base station (Figure 4, Column 8 lines 17 – 20).

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7. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Steer (6,845,246) in view of Sunay et al. (5,940,743) as applied to Claim 24 above, and further in view of Amirijoo et al. (US 6,603,976).

Regarding Claim 25, Steer in view of Sunay teaches all of the claimed limitations recited in Claim 24. Steer in view of Sunay does not teach a mobile positioning center (MPC), wherein the BSC queries the MPC to determine the location of the mobile station.

Amirijoo teaches a mobile positioning center (MPC), wherein the BSC queries the MPC to determine the location of the mobile station (Column 3 lines 26 – 29).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the MPC taught by Amirijoo in the system of Steer in view of Sunay as an alternative means of determining the location of the mobile stations.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the

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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

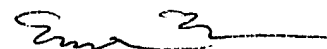
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Raymond S. Dean whose telephone number is 571-272-7877. The examiner can normally be reached on Monday-Friday 6:00-2:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward F. Urban can be reached on 571-272-7899. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Raymond S. Dean
June 13, 2006



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SUPERVISORY PATENT EXAMINER
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